

# THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

## Wisconsin Agricultural Experiment Station

Whereas, THERE HAS BEEN PRESENTED TO THE  
**Secretary of Agriculture**

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *seventeen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS SPECIFIED BY THE OWNER OF THE RIGHTS. (34 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

OAT

'Goodland'

In Testimony Whereof, I have hereunto set  
 my hand and caused the seal of the Plant  
 Variety Protection Office to be affixed  
 at the City of Washington  
 this 27th day of October in  
 the year of our Lord one thousand nine  
 hundred and seventy-six

Attest:

*S. J. Rollin*  
 Commissioner  
 Plant Variety Protection Office  
 Grain Division  
 Agricultural Marketing Service

*John G. Tracy*  
 Acting Secretary of Agriculture



## APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

INSTRUCTIONS: See Reverse.

1. VARIETY NAME OR TEMPORARY DESIGNATION <b>GOODLAND</b>	2. KIND NAME <b>Oats</b>	FOR OFFICIAL USE ONLY	
		PV NUMBER <b>7500004</b>	
3. GENUS AND SPECIES NAME <b><u>Avena sativa</u></b>	4. FAMILY NAME (Botanical) <b>Gramineae</b>	FILING DATE <b>7.22.74</b>	TIME <b>9</b> A.M.
	5. DATE OF DETERMINATION <b>Dec. 27, 1973</b>	FEE RECEIVED \$ <b>250.00</b> \$ <b>250.00</b> \$ <b>250.00</b>	BALANCE DUE \$ <b>—</b> \$ <b>—</b> \$ <b>—</b>
6. NAME OF APPLICANT(S) <b>Wis.Agr.Exp. Station</b> <b>H. L. Shands, Authorized</b>	7. ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) <b>Agricultural Hall</b> <b>University of Wisconsin</b> <b>Madison, WI 53706</b>	8. TELEPHONE AREA CODE AND NUMBER <b>608</b> <b>262-3994</b> <b>262-6527</b>	
9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: (Corporation, partnership, association, etc.) <b>Wis. Agr. Exp. Station</b>	10. STATE OF INCORPORATION	11. DATE OF INCORPORATION	

12. Name and mailing address of applicant representative(s), if any, to serve in this application and receive all papers:

**H. L. Shands, Agronomy Building, University of Wisconsin, Madison, WI 53706**

## 13. CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:

- ☒ 13A. Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.)
- ☒ 13B. Exhibit B, Botanical Description of the Variety
- ☒ 13C. Exhibit C, Objective Description of the Variety
- ☒ 13D. Exhibit D, Data Indicative of Novelty
- ☒ 13E. Exhibit E, Statement of the Basis of Applicant's Ownership

14A. Does the applicant(s) specify that seed of this variety be sold by variety name only as a class of certified seed? (See Section 83(a). (If "Yes," answer 14B. and 14C. below.) ☒ YES ☐ NO14B. Does the applicant(s) specify that this variety be limited as to number of generations? ☒ YES ☐ NO14C. If "Yes," to 14B, how many generations of production beyond breeder seed? **Three**☒ FOUNDATION ☒ REGISTERED ☒ CERTIFIED

The applicant declares that a viable sample of basic seed of this variety will be deposited upon request before issuance of a certificate and will be replenished periodically in accordance with such regulations as may be applicable.

*The undersigned applicant(s) of this sexually-reproduced novel plant variety believes that the variety is distinct, uniform, and stable as required in Section 41 and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.*

Applicant is informed that false representation herein can jeopardize protection and result in penalties.

**July 12, 1974**  
(DATE)**H. L. Shands**  
(SIGNATURE OF APPLICANT)**Revisions Aug. 12 and 27 1976**  
(DATE)**1**  
(SIGNATURE OF APPLICANT)

## Exhibit A, Origin and Breeding History of the Goodland (CI 9202)

## Variety of Oats.

Goodland was developed primarily by workers at the Wisconsin Agricultural Experiment Station. The final cross Trispermia x Belar 2x Goodfield 3x Goodfield 4x Garland was made in the greenhouse in 1963-64. The  $F_1$  was grown in the nursery in 1964 and the  $F_2$  was grown as spaced plants in 1965. The  $F_3$  was grown in head (panicle) rows in 1966. The  $F_4$  was grown in head rows in 1967, and this was followed by tests in replicated trials at Madison in 1968, and at several University Experimental Farms for 4 years. There was minor ununiformity of plant height, with less than a half percent being somewhat taller than the remainder at time of distribution. More than 99.5 percent of the grain fluoresced, while the remainder did not. Progeny-row purification later eliminated ~~height and fluorescence non-uniformity~~ <sup>and thereby provided stability</sup>. Foundation seed was released to growers of certified seed in Wisconsin in the spring of 1974. 8/27/76

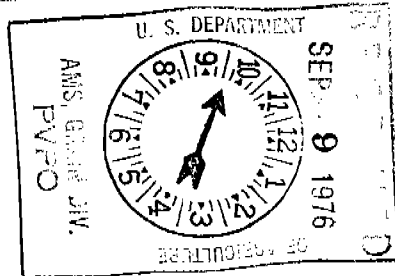
Revised Aug. 12, 1976

Exhibit B, Botanical Description of the Variety.

Goodland oats is classified as Avena sativa L. Plants are medium height to mid-short with mid-size leaves consisting of sheath, ligule, and blade. Panicle is equilateral with ascending branches during kernel filling but less erect at maturity. Rachis is straight. Caryopsis is retained in a semi-coriaceous lemma and a membranous palea. Spikelet separation is by fracture and floret separation is by disarticulation. Lemma color is yellow when mature. Kernel weight is near 29.5 mg. Groat percent is near 72. Lemma awns are absent or very infrequent.

Revised Aug. 12, 1976.

## INSTRUCTIONS



GENERAL: Send an original copy of the application, exhibits and \$250.00 fee to U.S. Dept. of Agriculture, Agricultural Marketing Service, Grain Division, 6525 Belcrest Road, Hyattsville, Maryland 20782. (See Section 180.175 of the regulations and rules of practice.) Retain one copy for your files. All items on the face of the form are self-explanatory unless noted below.

## ITEM

- 5 Insert the date the applicant determined that he had a new variety based on the definition in Section 41 (a) of the Act and decision is made to increase the seed.
- 13a First, give the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method. Second, give the details of subsequent stages of selection and multiplication. Third, indicate the type and frequency of variants during reproduction and multiplication and state how these variants may be identified. Fourth, provide evidence on stability.
- 13b First, give any special characteristics of the seed and of the plant as it passes through the seedling stage, flowering stage and the fruiting stage. Second, describe the mature plant and compare it with a similar commercial variety grown under the same conditions, and indicate the differences.
- 13c A supplemental form will be furnished by the PVPO to describe in detail a variety for each kind of seed.
- 13d Provide complete data indicative of novelty. Seed and plant specimens or photographs of seed and plant comparisons clearly indicating novelty may be submitted. Seeds submitted may be sterile.
- 13e Indicate whether applicant is the actual breeder, the employer of the breeder, the owner through purchase or inheritance, etc.



## Exhibit D. Data Indicative of Novelty.

Novelty of Goodland oats is based on:

Parentage different from other oat varieties.

Increased groat protein.

Detail: Trispermia x Belar 2x Goodfield 3x Goodfield 4x Garland.

Groat protein % Madison, Wis.	1971	1972	1973	Avg.
Dal	19.5	20.9	20.1	20.16
Goodland	19.3	21.4	21.4	20.70

X1656-1 in Wisconsin Bulletin R2569 was named Goodland in 1974.

Average groat protein %, 6 locations Wisconsin 1973:

Dal 20.8

Goodland 22.4

8/27/76

*Dal is most similar to Goodland oats.*  
~~There is considerable similarity between Goodland and Dal oats.~~

Positive difference: Goodland grain fluoresces ~~darkly~~ under U.V. light,  
~~does not~~ while Dal ~~fluoresces~~ ~~lightly~~.  
 8/27/76

Lesser differences: Goodland has lower oil percentage in groats and slightly higher protein than Dal. Goodland has no hairs at base of kernel while Dal has a few. Bushel weights of Goodland a little less than for Dal. Goodland plants have less height than Dal, and Goodland has shorter and narrower panicles than Dal. Goodland has less crown rust resistance than Dal, and has more susceptibility to Barley Yellow dwarf virus than Dal.

Single comparisons Goodland-Froker: Goodland has higher groat protein; or about 3 percent.

A single Goodland-Lodi comparison: Goodland has shorter plants and shorter panicles. Lodi grain fluoresces light color under U. V. light while Goodland fluoresces dark.

Exhibit E.

The Wisconsin Agricultural Experiment Station is the sole owner  
of Goodland oats.

Revised Aug. 12, 1976



## 8. RACHIS:

☐ 2 1 = RECURVED (Yancey) 2 = ERECT (Walken) ☐ 1 ☐ 8 MM. SECOND FLORET RACHILLA SEGMENT LENGTH

☐ 1 SECOND FLORET RACHILLA SEGMENT: 1 = HAIRLESS 2 = HAIRY ☐ RACHILLA HAIRS: 1 = SHORT 2 = LONG

## 9. SPIKELET:

☐ 3 SPIKELET SEPARATION BY: 1 = ABSCISSION 2 = SEMIABSCISSION 3 = FRACTURE

☐ 1 FLORET SEPARATION BY: 1 = DISARTICULATION 2 = HETEROFRACTURE 3 = BASIFRACTURE

☐ 2 ☐ 0 FLORETS PER SPIKELET (mean no.)

## 10. GLUMES: (Glume Color: The Royal Horticultural Society's or any recognized color chart should be used to determine the color of the described variety.)

☐ 0 ☐ 7 MM. WIDTH ☐ 2 ☐ 3 MM. LENGTH ☐ 0 ☐ 9 NO. OF VEINS ON GLUMES ☐ 1 COLOR: 1 = WHITE 2 = YELLOW 3 = RED 4 = STRIPED

## 11. LEMMA: (Lemma Color: The Royal Horticultural Society's or any recognized color chart should be used to determine the color of the described variety.)

☐ 1 ☐ 5 MM. LENGTH ☐ 2 COLOR: 1 = WHITE 2 = YELLOW 3 = RED 4 = GRAY 5 = BLACK

☐ 1 HAIRINESS OF DORSAL SURFACE: 1 = HAIRLESS 2 = HAIRY

## 12. AWN (First floret):

☐ 2 OCCURENCE: 1 = ABSENT (Walken) 2 = INFREQUENT (Yancey) 3 = COMMON (Chilocco) 4 = FREQUENT (Random)

☐ TYPE: 1 = NON-TWISTED 2 = TWISTED 3 = TWISTED GENICULATE

☐ MM. AWN LENGTH

## 13. SEED:

☐ 1 FLORESCENCE UNDER ULTRAVIOLET LIGHT: 1 = FLORESCENT 2 = NON-FLORESCENT

☐ 1 BASAL HAIR: 1 = ABSENT (Florida 501) 2 = ABSENT TO FEW (Yancey) 3 = FEW TO SEVERAL (Lee) 4 = SEVERAL TO NUMEROUS (Florilee) 5 = NUMEROUS (Red Rustproof)

☐ MM. BASAL HAIR LENGTH

☐ 2 ☐ 9 ☐ 5 GMS. PER 1,000 SEEDS ☐ 2 ☐ 1 MG. GROAT WEIGHT (each)

☐ 2 ☐ 0 ☐ 8 % GROAT PROTEIN ☐ 0 ☐ 6 ☐ 5 % GROAT OIL

## 14. INSECTS: (0 = NOT TESTED, 1 = SUSCEPTIBLE, 2 = RESISTANT)

☐ 1 CEREAL LEAF BEETLE ☐ 0 BLUEGRASS BILLBUG ☐ 0 GRAIN BUG (C. Sayi) ☐ 0 NEMATODE (Type) \_\_\_\_\_

☐ 0 GREEN BUG (Biotype) \_\_\_\_\_ OTHER (Specify) \_\_\_\_\_

## 15. DISEASE: (0 = NOT TESTED, 1 = SUSCEPTIBLE, 2 = RESISTANT)

☐ 1 HALO BLIGHT ☐ 0 POWDERY MILDEW ☐ 1 SEPTORIA LEAF BLOTCH ☐ 0 SOIL-BORNE MOSIAC

☐ 0 HELMINTHOSPORIUM LEAF BLOTCH ☐ 1 YELLOW DWARF VIRUS ☐ 2 VICTORIA BLIGHT ☐ 0 OTHER (Specify) \_\_\_\_\_

## SPECIFY RACES TESTED:

	RACES SUSCEPTIBLE	RACES RESISTANT
<input type="checkbox"/> CROWN RUST.....	Int 264B	326
<input type="checkbox"/> STEM RUST.....	(AB genes) 31	72 2AH
<input type="checkbox"/> COVERED SMUT.....		
<input type="checkbox"/> LOOSE SMUT.....		

## 16. INDICATE VARIETY YOU BELIEVE MOST CLOSELY TO RESEMBLE THAT SUBMITTED:

CHARACTER	VARIETY	CHARACTER	VARIETY
PLANT TILLERING	Da1	LEAF COLOR	Da1
LEAF SIZE	Da1	LEAF CARRIAGE	Da1
SEED COLOR	Holden	SEED SHAPE	Da1

COMMENTS: